3635/AF/18

CUSTOMER NO.: 020991

PATENT
Docket No. PD-990212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ARTHUR WANG
Serial No. 09/542,243
Filed: April 3, 2000
For: SATELLITE READY BUILDING AND METHOD FOR FORMING THE SAME

Date: November 5, 2001

Group Art Unit: 3635

Examiner: C. Nguyen

APPEAL BRIEF TRANSMITTAL LETTER

Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is the **Appeal Brief, in triplicate**, for the above-identified patent application.

____ Applicant petitions for an extension of time for _____ months(s). If an additional extension of time is required, please consider this a petition therefor.

Fee $_____

____ An extension for _____ months(s) has already been secured; the fee paid therefor of is deducted from the total fee due for the total months of extension now requested. $_____

Extension fee due with this request $_____

X Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

____ The Appeal Brief Fee was paid in a prior appeal in which there was no decision on the merits by the Board of Appeals.

X The Appeal Brief Fee of $320.00 is due.

X The total fee due is $320.00. Please charge this amount to Deposit Account No. 50-0383 of Hughes Electronics Corporation, El Segundo, California. If any additional appeal brief fee or extension fee is required, please charge to Deposit Account No. 50-0383.

This letter is submitted in triplicate.

Respectfully submitted,

Vijayalakshmi D. Duraiswamy

Vijayalakshmi D. Duraiswamy, Registration No.: 31,505
Attorney for Applicant(s)

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Commissioner of Patents, Washington, DC 20231 on **November 5, 2001.**
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Vijayalakshmi D Duraiswamy
Vijayalakshmi D. Duraiswamy

CUSTOMER NUMBER 020991
HUGHES ELECTRONICS CORPORATION
Patent Docket Administration
Bldg. 001, M/S A109
PO Box 956
El Segundo, CA 90245-0956
Telephone: 310-662-9919
Date: November , 2001

PATENT
Docket No. PD-990212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Date: November 5, 2001

Arthur Wang

Serial No: 09/542,243 Group Art Unit: 3635

Filed: 04/03/00 Examiner: C. Nguyen

Title: SATELLITE READY BUILDING AND METHOD FOR FORMING THE SAME

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. § 1.8(a))

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Vijayalakshmi D. Duraiswamy
Signature

Date: Nov. 5, 2001 Vijayalakshmi D. Duraiswamy

BRIEF ON APPEAL

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

The following Appeal Brief is submitted pursuant to the Appeal filed September 27, 2001 in the above-identified application.

1. Real Party in Interest

The real party in interest in this matter is Hughes Electronics Corporation in El Segundo, California (hereinafter "Hughes"). Hughes is the assignee of the present invention and application. Also, Hughes is a wholly owned subsidiary of General Motors Corporation.

2. Related Appeals and Interferences

There are no other known appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. Status Of The Claims

Claims 17-28 are currently pending and stand under final rejection, from which this appeal is taken. Claims 1-16 have been withdrawn pursuant to a restriction requirement.

4. Status Of Amendments

The Notice of Appeal was submitted in response to the Final Office Action mailed August 7, 2001. No amendments have been filed subsequent to the final rejection.

5. Summary Of The Invention

For satellite services provided to a building after it has been constructed, oftentimes it is difficult to place the wires or the antenna so that the apparatus is

aesthetically pleasing since, for example, wires cannot be conveniently run within walls and the satellite dish typically is a parabolic antenna that extends from the roof or the side of the house. Moving the television or personal computer to another room involves re-routing the wires or adding additional wires to the home.

The present invention is directed to a satellite ready building (10) that comprises a plurality of studs (20) and satellite wires (26) positioned adjacent to the studs (20) having a first termination (28) and a second termination (30). A connector (32) is coupled to the second termination of the wires. The first termination (28) is coupled through the roof (16) or the siding of the building. Drywall (22) is installed in the building after the wires are installed. The first termination may be installed in a radome (14) positioned on the roof of the building. The radome (14) is used to house a flat satellite antenna (24) therein.

6. Issues

The following three issues are presented in this appeal, all of which correspond directly to the Examiner's final grounds for rejection in the Final Office Action dated April 10, 2001:

(1) Whether claims 17-22 are patentable under 35 U.S.C. § 103(a) over *Oliver* (U.S. Patent No. 6,166,329, hereinafter, "*Oliver*") in view of *Macdonald* (U.S. Patent No. 5,835,128, hereinafter, "*Macdonald*").

(2) Whether claims 22, 24 and 26 are patentable under 35 U.S.C. § 103(a) over *Macdonald* in view of *Mast* (U.S. Patent No. 6,166,705, hereinafter Mast") and *Zhang* (U.S. Patent No. 6,201,509, hereinafter, "*Zhang*").

(3) Whether claims 23 and 26 and are patentable under 35 U.S.C. § 103(a) over *Macdonald* in view of *Spano* (U.S. Patent No. 6,204,824, hereinafter "Spano").

7. Grouping of Claims

The rejected claims have been grouped together into three groups by the Examiner in each of the rejections. The Appellant believes, however, that each of the rejected claims stands on its own recitation and is separately patentable for the reasons set forth in more detail below.

8. Argument

(a) Claims 17-22

Claims 17-22 stand finally rejected under 35 USC §103(a) as being unpatentable over *Oliver* (U.S. Patent 6,166,329) in view of *Macdonald* (U.S. Patent 5,835,128). Appellant respectfully traverses.

Claims 17-22 have one independent claim 17 that is directed to a satellite ready building that has a plurality of studs, satellite wires positioned adjacent to the studs with a first termination and a second termination so that the first termination is positioned outside the building. A connector is coupled to the second termination. A drywall layer is coupled to the studs to substantially enclose the satellite wires therein.

The Examiner points to the *Oliver* reference for disclosing "an electrical device assembly comprising a plurality of studs 40, satellite wires enclosed within 18, a terminating connector 10, a drywall layer 42." The Examiner recognizes that *Oliver* does not disclose expressly a universal connector.

The *Oliver* reference describes an electrical box assembly for installation in a building or house that has a protector 32 with a raised area 34 used to protect the inside of the box. Appellant admits that the *Oliver* reference teaches wires 16. However, wires 16 are not described in further detail. More specifically, the wires 16 are never described as a satellite wire. In the Final Office Action, the Examiner takes official notice that the "satellite wires" claimed are equivalent to electrical wires. Appellant submits that normal

electrical wires used to connect electrical outlets and the like are not suitable for satellite communication systems. Although no specific example is provided in the present application, the specification states that the type of wire depends upon the system. Thus, *Oliver* does not teach or suggest "satellite" wires.

The Examiner also points to "terminating connector 10" in the *Oliver* reference. The key missing elements in both references are the terminations. Appellant respectfully submits that reference numeral 10 is directed to a pre-wire-to-device assembly that in Col. 3, line 55 of the *Oliver* reference is described as an "electrical device, such as an electrical switch or receptacle (outlet)." Thus, from this description the only conclusion to be drawn is that the device assembly 10 is used for standard wiring for homes such as for switches and/or receptacles. Therefore, one cannot derive from this teaching the suggestion of satellite wires or a connector coupled to the second termination of the satellite wire. There is no teaching or suggestion of a first connection positioned outside the building for the satellite wires.

The Examiner cites the *Macdonald* reference for "redistributing a television signal to a multiplicity of receiver units." Appellant respectfully submits that the *Macdonald* reference does not teach the deficiencies of the *Oliver* reference. Appellant also respectfully submits that the *Macdonald* reference is not properly combinable with the *Oliver* reference. The *Macdonald* reference is directed to a wireless distribution system as noted in Col. 1, line 10. The *Macdonald* system receives satellite signals at a

local site and converts the signals to a lower frequency than that of the satellite signals. The lower frequency signals are then RF transmitted through the multi-unit dwelling in the form of an RF column. The satellite signal is retransmitted wirelessly next to a wall so that a television receiver positioned thereunder can receive the signal. To receive the signals within the RF columns, the receiver must be located thereunder. This is a drawback since the transmitter may be positioned in a desirable location for a person on one floor but not for a person on the next floor. In the case of *Macdonald*, all televisions on all floors might need to be moved as well as the transmitter on the roof. Wiring or outdoor retransmitters may also be expensive and thus cost prohibitive for many potential customers. Also, additional complications could be encountered in the process of outdoor unit (ODU) installation, customized routing, drilling through walls, or painful connection debugging .

The *Macdonald* reference teaches away from a pre-wired type of system. However, the appellant advantageously realizes that by pre-wiring satellite wires within the walls of the building, many advantages discussed in the specification can be achieved.

In the Examiner's arguments on page 3 of the Final Office Action, it states that the, "Examiner considers it would have been an obvious matter when one having ordinary skill in the art at the time of invention was made to replace the electrical wires for satellite wires connected to [the] antenna, since *Macdonald* teaches a signal

transmitted and receiving [received] by [the] antenna, pointed towards a satellite (Col. 4, line 35-37)." The appellant has reviewed this passage and can find no teaching or suggestion to replace the rebroadcasting unit 13 disposed on the roof as described in the reference with wires. In fact, appellant submits that the purpose of the *Macdonald* reference would be destroyed should wires be used rather than a rebroadcasting unit. That is, no rebroadcasting unit would be required.

The *Macdonald* reference teaches an antenna that is used to receive the retransmitted signals. Therefore, no connectors or wires are used within the building shown in *Macdonald.* Therefore, appellant respectfully submits that neither the *Macdonald* reference nor the *Oliver* reference teaches "satellite wires positioned adjacent to said studs having a first termination and a second termination, said first termination positioned outside the building." Also, neither reference teaches a "connector coupled to said second termination of said satellite wire." Although *Oliver* teaches a switch or an outlet, the switch or outlet is believed not to be the same as or equivalent to the "connector" described in the present application. Therefore, neither of the references teaches or suggests all the elements in the prior art together or in combination. Thus, even when combined the present invention is not taught or suggested. Also, there is no motivation provided in either reference for the combination suggested by the Examiner. The *Macdonald* reference actually teaches away from using satellite wires to connect to

the satellite antenna. Therefore, appellant respectfully requests the Examiner to reconsider the present rejection of claim 17.

Claim 18 is also believed to be independently patentable. Claim 18 is dependent on claim 17 and recites that the connector is a universal connector. As described above, neither of the references teaches or suggests a universal connector.

Claim 19 is also believed to be independently patentable. Claim 19 is dependent on claim 18 and recites that the universal connector comprises a phone jack, a TV cable jack, and a satellite TV jack. Neither of the two references recites the universal connector as described with respect to claim 18, and therefore they do not teach the specific recitations of a phone jack, a cable TV jack, and a satellite TV jack.

Claim 20 is also believed to be independently patentable. Claim 20 is dependent on claim 19 and recites that the universal connector comprises a LAN jack. Neither of the two references cited describes a LAN jack.

Claim 21 is also believed to be independently patentable. Claim 21 is dependent on claim 17 and recites that the radome encloses the first termination. As described above, no first termination is found in either of the references that is positioned outside the building. Therefore, claim 21 is not taught or suggested in the art cited.

Claim 22 is also believed to be independently patentable. Claim 22 is dependent on claim 21 and recites that a satellite antenna is positioned within the radome.

Neither of the references recites a radome or a satellite antenna positioned within the radome.

(b) Claims 22, 24-28

Claims 22 and 24-28 stand finally rejected under 35 USC §103(a) as being unpatentable over *Macdonald* in view of *Mast* and *Zhang*. Neither the *Mast* reference nor the *Zhang* reference teaches the shortcomings of *Macdonald* as stated above. Claim 22 is dependent from claim 21, which, in turn, is dependent from claim 17. Claim 22 recites that a satellite antenna is positioned within the radome that includes the first termination recited in claim 17. The *Mast* reference is directed to a multi-tile configured phased array antenna architecture. No teaching or suggestion, however, is found in the *Mast* reference for positioning a satellite antenna within a radome that has a first termination therein.

The *Zhang* reference is directed to a coaxial continuous transverse stub element device antenna array and filter. The *Zhang* reference also does not teach the presence of a first termination within a radome that is coupled to a satellite antenna. Therefore, because neither reference teaches the radome, appellant respect requests the Examiner to reconsider this rejection with respect to claim 22.

Claim 24 recites that the radome has a color to substantially match a roof color. Because *Macdonald, Zhang* and *Mast* do not teach or suggest a radome as

described above, claim 24 is also believed to be allowable for the same reasons set forth above.

Claim 25 depends also from claim 22 and recites that the antenna within the radome is a flat antenna. With respect to claim 25, appellant admits that the *Mast* reference illustrates a phased array antenna which is generally flat. However, this phased array antenna is not positioned within a radome as set forth in claim 22. Therefore, appellant believes that claim 25 is also allowable for the same reasons set forth above.

Claim 26 is also dependent on claim 22 and recites that a remote control may be used to position the antenna. None of the references teaches or suggests the use of a remote control for positioning the antenna.

Claim 27 recites that the antenna comprises a phase array antenna. Although a phased array antenna is recited in the *Mast* reference, the *Mast* reference does not describe a phased array antenna positioned within a radome as recited in claim 22.

Claim 28 is also dependent on claim 22 and recites that the antenna is a variable-inclination-continuous-transverse-stub. Although the *Zhang* reference teaches a continuous transverse stub element, no teaching or suggestion is provided in the *Zhang* reference for a variable inclination continuous transverse stub. Likewise, claim 28 is dependent on claim 22, which recites that the variable-inclination-continuous-transverse-stub is positioned within a radome. As described above, none of the references teaches or suggests the use of the continuous transverse stub within a radome.

(c) Claims 23 and 26

Claims 23 and 26 stand finally rejected under 35 USC §103(a) as being unpatentable over *Macdonald* in view of *Spano*. Claim 23 is dependent on claim 22. Claim 23 is directed to a low-profile radome sized to contain the satellite antenna recited in claim 22. *Spano* teaches an antenna within a housing. However, *Spano* fails to teach that a first termination is positioned within the housing and a second termination is positioned within a building. Therefore, *Spano* fails to teach or suggest the missing elements of the *Macdonald* reference cited above. Appellant therefore requests reconsideration of this rejection as well.

Claim 26 is directed to a remote control used for positioning the antenna. Neither the *Spano* reference nor the *Macdonald* reference describes a remote control used for positioning the antenna. Therefore, appellant respectfully requests reconsideration of this rejection as well.

9. Appendix

A copy of each of the claims involved in this appeal, namely claims 17-28, is attached hereto as Appendix A.

10. Conclusion

For the reasons advanced above, Appellant respectfully contends that each claim is patentable. Therefore, reversal of all rejections is requested.

Respectfully submitted,

Vijayalakshmi D. Duraiswamy

Vijayalakshmi D. Duraiswamy
Registration No. 31,505
Attorney for Appellant

Dated: November 5, 2001

Hughes Electronics Corporation
Building 001 M/S A109
200 N. Sepulveda Blvd.
P.O. Box 956
El Segundo, CA 90245-0856
(310) 662-9919

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPENDIX A

17. A satellite ready building comprising:

a plurality of studs;

satellite wires positioned adjacent to said studs having a first termination and a second termination, said first termination positioned outside the building;

a connector coupled to said second termination of said satellite wire; and

a drywall layer coupled to said studs to substantially enclose the satellite wires therein.

18. A satellite ready building as recited in claim 17 wherein said connector comprises a universal connector.

19. A satellite ready building as recited in claim 18 wherein said universal connector comprises a phone jack, a cable TV jack, and a satellite TV jack.

20. A satellite ready building as recited in claim 19 wherein said universal connector comprises a LAN jack.

21. A satellite ready building as recited in claim 17 further comprising a radome enclosing said first termination.

22. A satellite ready building as recited in claim 21 further comprising a satellite antenna positioned within said radome.

23. A satellite ready building as recited in claim 22 where radome is low-profile sized to contain said satellite antenna therein.

24. A satellite ready building as recited in claim 22 wherein said radome has a color to substantially match a roof color.

25. A satellite ready building as recited in claim 22 wherein said antenna comprises a flat antenna.

26. A satellite ready building as recited in claim 22 further comprising a remote control for positioning said antenna.

27. A satellite ready building as recited in claim 22 wherein said antenna comprises a phase array antenna.

28. A satellite ready building as recited in claim 22 wherein said antenna comprises a variable-inclination-continuous-transverse-stub.